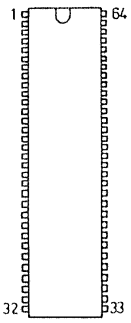
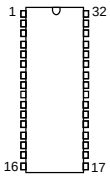
LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS- ABKÜRZUNGEN LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **+USYS:** System voltage
- **+U_VIDEO:** Video drive voltage for the CRT board
- **+ STDBY_ ON:** Standby data (0V standby , 0.6v switched ON)
- **+5V DST:** 5v unregulated voltage from the DST to supply the tuner and audio MSP device
- **+5V ON:** 5v regulated voltage from the DST to supply the tuner and audio MSP device
- **+5V UP :** Microprocessor supply voltage
- **BCL:** Beam current limiting information
- **CVBS:** Composite video / luminance signal
- **CVBS_OUT:** Composite video output
- **CVBS_TXT:** Composite video for teletext extraction
- **DEGAUSS:** Degauss signal
- **EW :** East / West
- **FORMAT / BC:** Full white control DATA depending on 16/9 selected format
- **HDRV:** Horizontal deflection signal
- **HTR1 / HTR2:** Heater voltage from the DST to CRT PCB
- **LFB:** L ine Fast Blanking
- **MUTE :** Mutes audio amplifiers
- **PO:** “Power ON “ IP95 : reset activated and output = 8v “PO” = 5v when TV is working in normally
- **POWER_FAIL:** Detection of mains supply and deflection stage failures
- **RESET:** Microprocessor reset signal
- **SAFETY:** Safety information from the deflection stage
- **SCL:** Serial Clock
- **SDA :** Serial Data
- **SIF:** Sound IF
- **TRAP_INFO:** 31.4Mhz IF trap activation
- **U_ STANDBY:** Standby voltage
- **U_DRIVER:** Horizontal sync signal from TDA8855H
- **U_TIMER:** 11v voltage used during “Switch ON “ phase and “Wake Up“ mode
- **V FLB:** Vertical flyback reference for the microprocessor
- **V GUARD:** Safety data generated by the vertical amplifier TDA 8351
- **V_RETRACE:** 42 / 48volts (depending on tube type) generated by the DST and used for vertical blanking
- **V_SUPPLY:** 13.5 to 15.5 volts (depending on tube type) generated by the DST

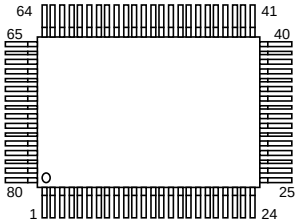
INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE -
CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN -
CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



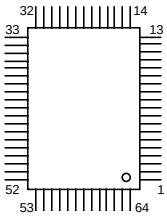
MPS3400C-PP-C6



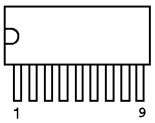
MX27C200MC-12



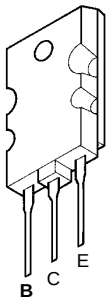
ST92R195



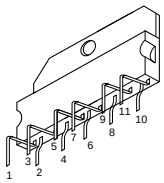
TDA8855H



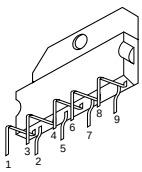
TDA8351



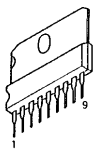
BUH516TH16



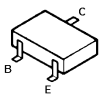
TDA7269



TDA6107Q

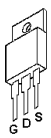


TDA 8139

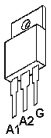


BC 847B
BC 857B
BCR141
BCR191
DTC113ZK
DTC144EK
TN1401

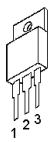
ST24C08-M
TS3702CD



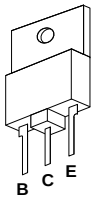
STP6 NA60F1



BT806 -600C



MC7812/CT



BD241C

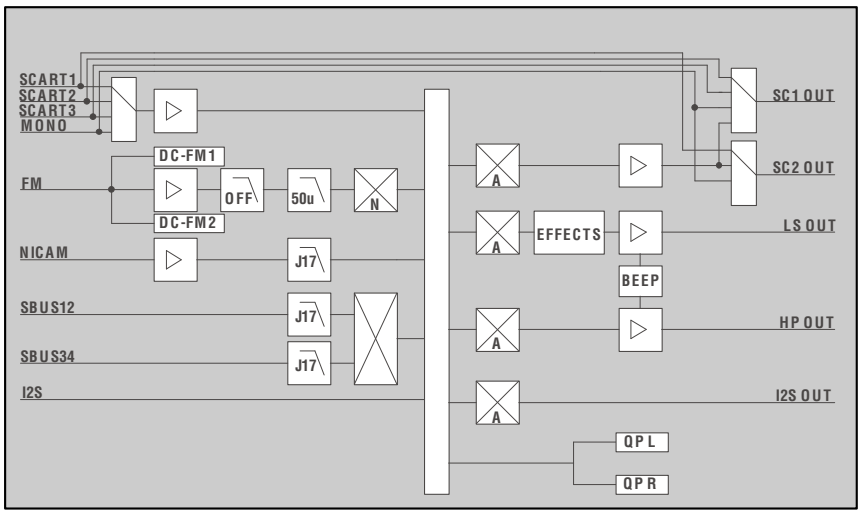
BC 337
BC 546B
BC 547B

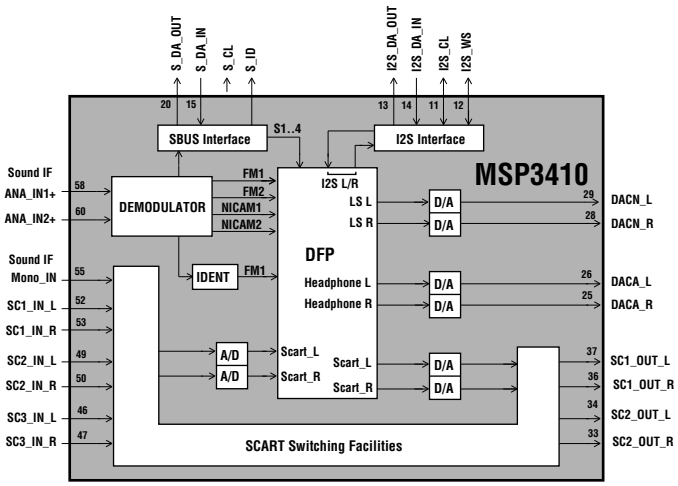
BF 422
BF423
2SA1020Y
2SC2236Y

MPS750

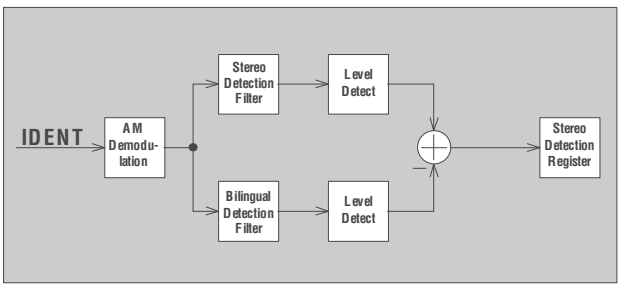
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

Audio baseband processing of the MSP3410

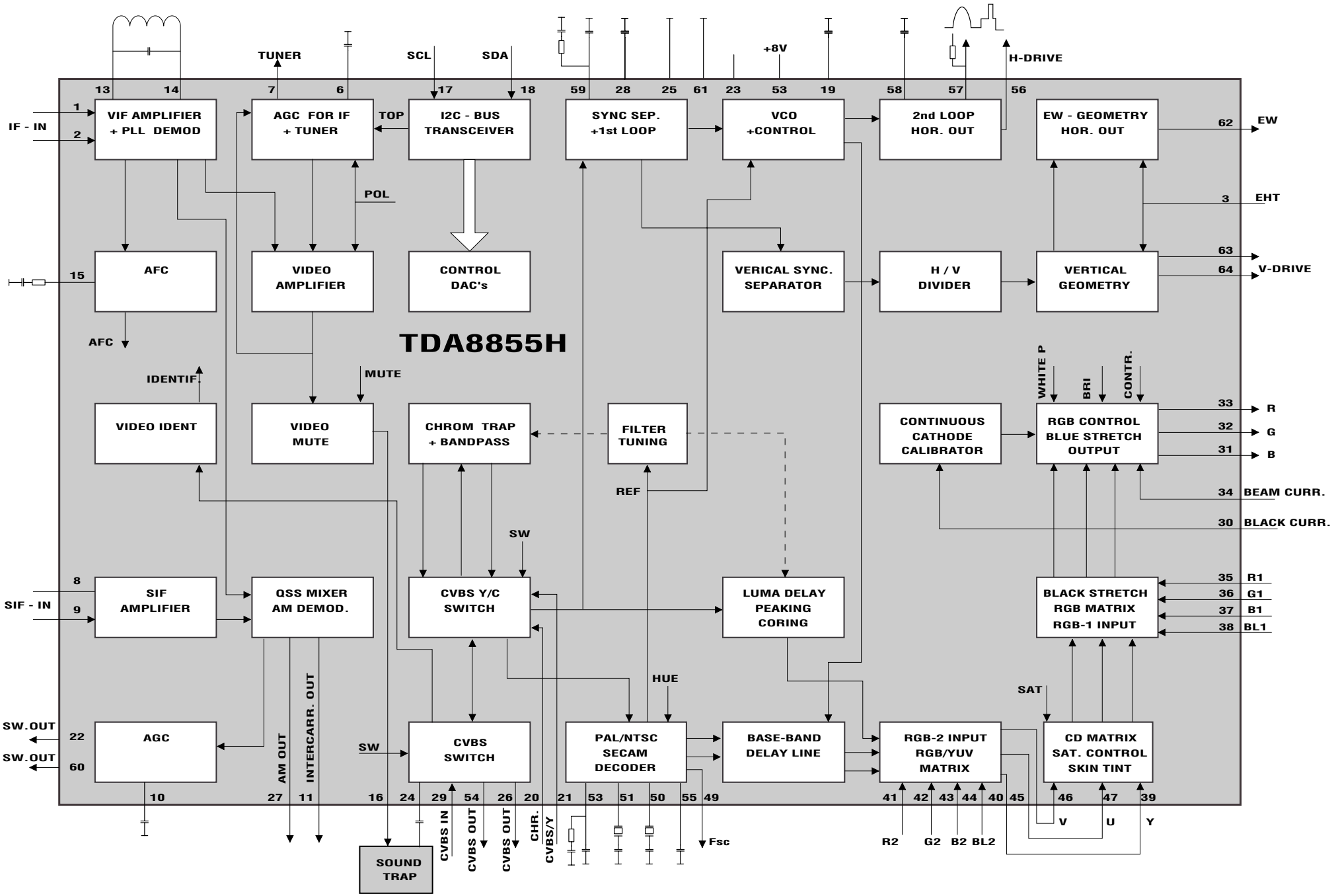




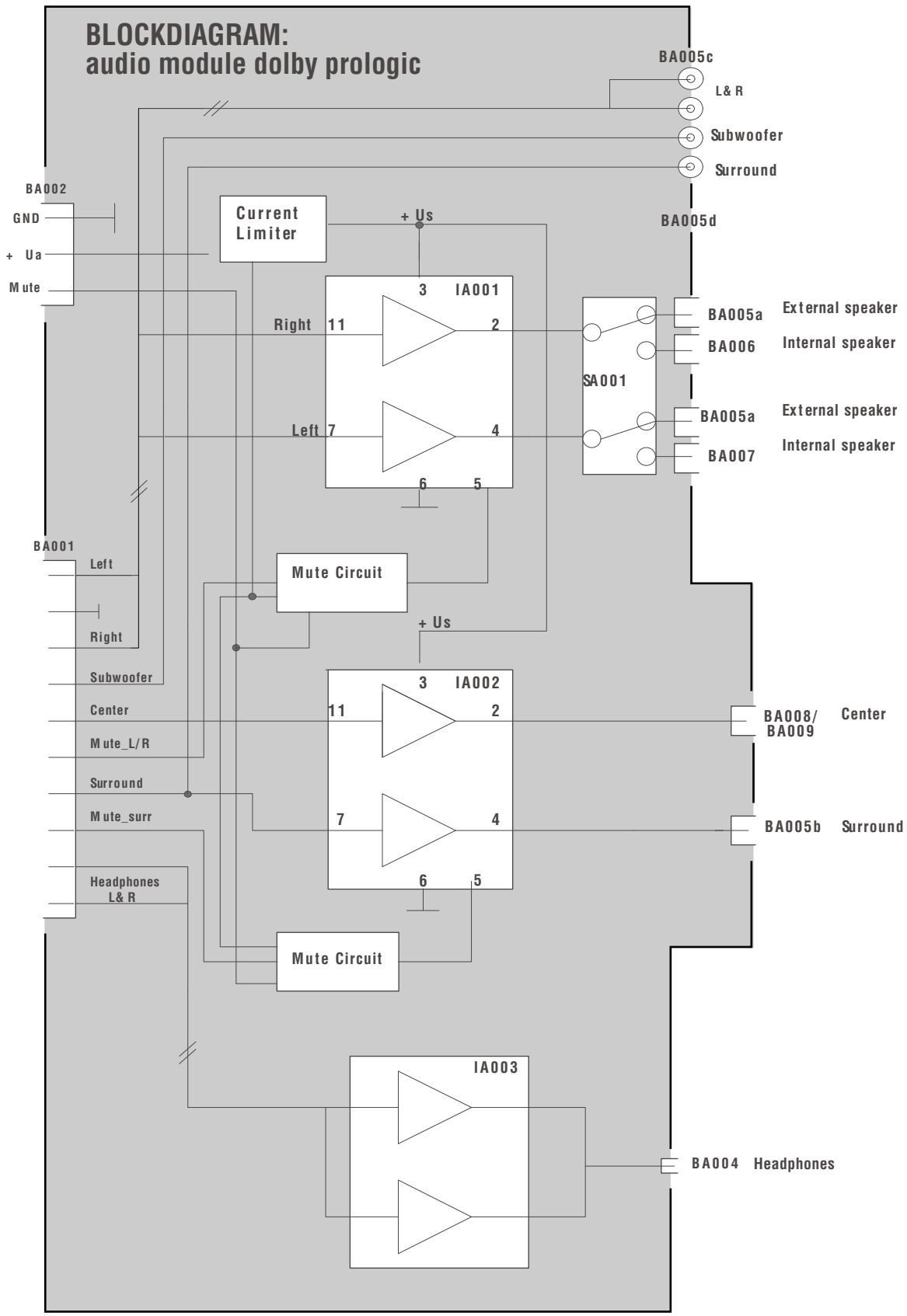
Detection part of the MSP 3410



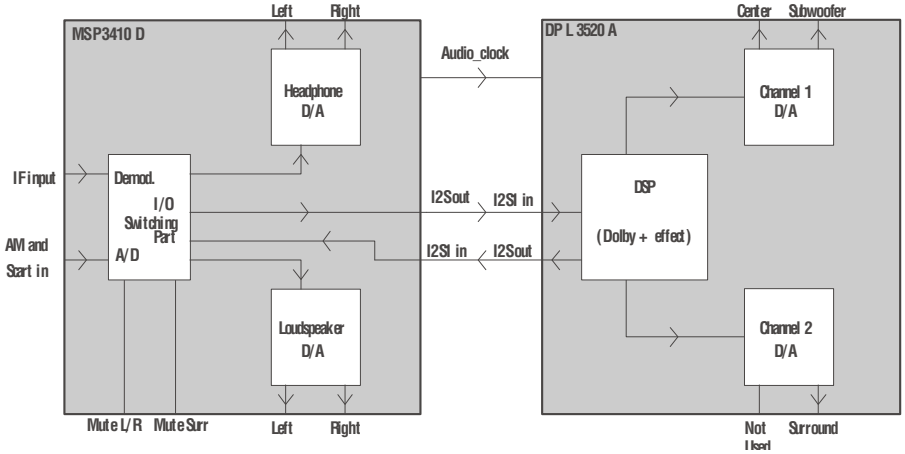
IV01 TDA 8855H



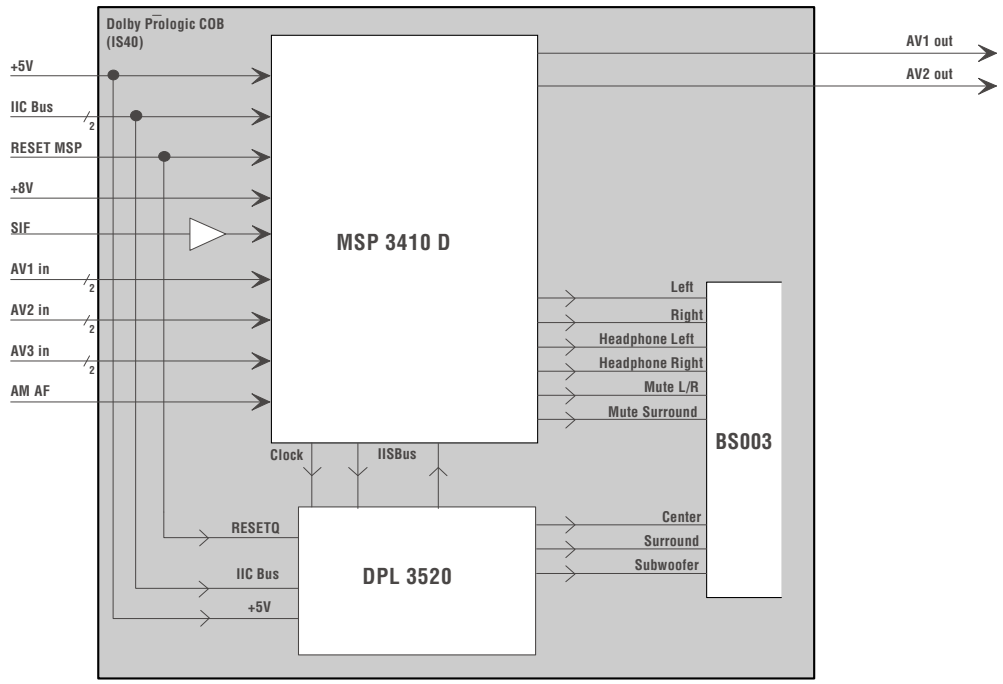
BLOCK DIAGRAM (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA SYNOPTIQUE (AUDIO MODULE DOLBY PROLOGIC)
BLOCKSCHALTBILD (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA A BLOCCI (AUDIO MODULE DOLBY PROLOGIC)
ESQUEMA DE BLOQUES (AUDIO MODULE DOLBY PROLOGIC)



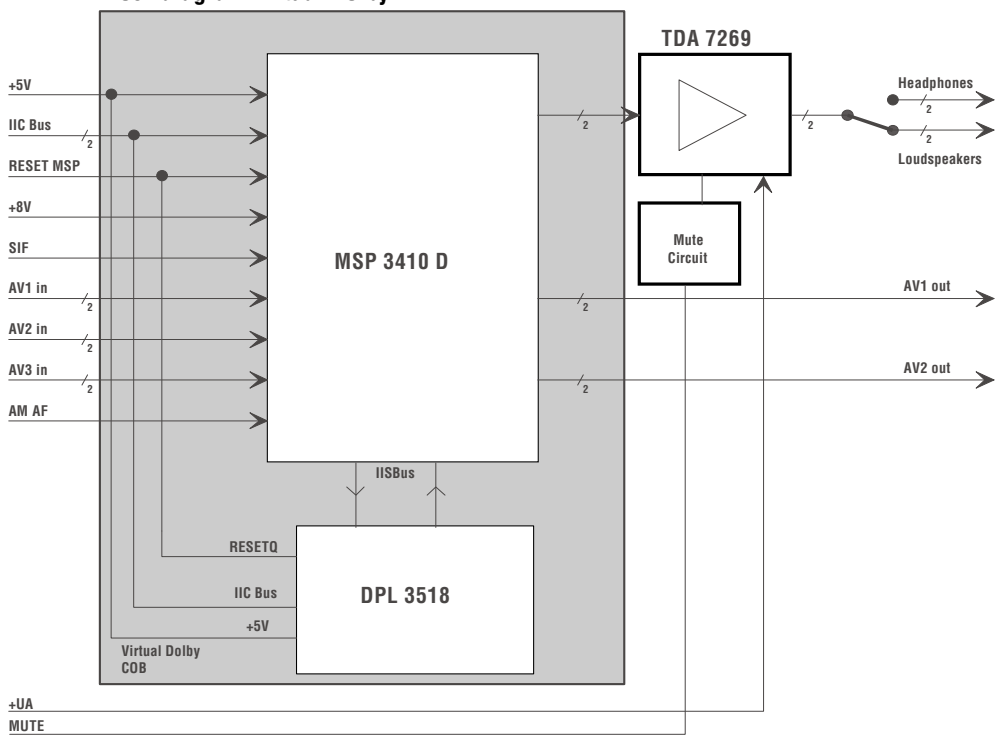
Interface requirement audio part with Dolby Prologic



Block diagram Dolby Prologic



Block diagram Virtual Dolby



CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

EACEM-IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

EACEM IRIS

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET/ RAINY/SNOWY ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED/ TRANSPORT DAMAGE
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATIONS/ SOFTWARE/ MODE/ CHANNELS/ FREQUENCY BAND
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
M	FOR A SHORT WHILE AFTER SWITCH-ON
N	AFTER MAKING A COPY
O	UNDER STRESSED CONDITIONS / HIGH LOAD
P	AT SWITCH-OFF

(*1)

CAUTION

THE 'X' EXTENDED SYMPTOM CODES (*-**X) SHOULD ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE
1	GENERAL	110	POWER PROBLEM OR NOT OPERATING	120	CHARGING PROBLEM	130	DISPLAY FUNCTION PROBLEM	140	ABNORMAL NOISE
		111	NO POWER	121	NO BATTERY CHARGING	131	FAULTY DISPLAY	141	CRT DISCHARGING NOISE
		112	NO POWER WHEN USING AC-ADAPTER	122	INCOMPLETE BATTERY CHARGE	132	FAULTY LAMP/LED OPERATION	142	EHT DISCHARGING NOISE
		113	NO POWER WHEN USING DRY BATTERIES	123	CHARGING TIME TOO LONG	133	FAULTY LEVEL METER OPERATION	143	NOISY CABINET/CRACKING TRAYS
		114	NO POWER WHEN USING RECHARGEABLE BATTERIES	12X	OTHER 'CHARGING' PROBLEM	134	FAULTY ON-SCREEN DISPLAY OPERATION	144	NOISY TRANSFORMER/HUMMING
		115	NO POWER FROM SOLAR CELL			135	ELECTRONIC TUNING DISPLAY FAULT	145	NOISY COMPONENT(S)
		116	NO POWER WHEN USING A CAR BATTERY			136	MECHANICAL TUNING DISPLAY FAULT	146	RATTLE
		117	SHORT OPERATION TIME/SHORT BATTERY LIFE			137	FAULTY TIME CODE DISPLAY	147	CLICKING
		118	POWER-OFF FUNCTION NOT WORKING			138	FAULTY ALARM/ERROR DISPLAY	148	CLOCK NOISE
		119	NO SWITCH-ON FROM STANDBY			139	DISPLAY DIM/TOO DARK	149	CRACKING
		11A	POWERS UP, BUT NO OPERATION			13A	UNUSUAL OR INCORRECT MESSAGE IN DISPLAY	14A	WHISTLING
		11B	CYCLIC POWER ON/OFF			13B	NO BACKLIGHT	14X	OTHER 'ABNORMAL' NOISE
		11C	BLOWING EXTERNAL (MAINS) FUSE			13C	BEEPS, NO DISPLAY		
		11D	SET SWITCHES OFF BY ITSELF			13D	WARNING LIGHT DOES NOT WORK		
		11E	BACKUP BATTERY PROBLEM			13E	WARNING LIGHT LIGHTS UP		
		11F	NOT OPERATING			13X	OTHER 'DISPLAY FUNCTION' PROBLEM		
		11G	NO AUTOMATIC SWITCH ON/OFF						
		11H	PROTECTION SWITCH/FUSE IN SET TRIGGERS						
		11J	RECHARGEABLE BATTERY NOT RECOGNIZED						
		11X	OTHER 'POWER' PROBLEM						
2	COMMUNICATION	210	NO RECEPTION OR CONNECTION	220	POOR RECEPTION OR CONNECTION	230	TRANSMISSION/CONNECTION PROBLEM	240	NOISY RECEPTION/TRANSMISSION
		211	NO AM RECEPTION	221	POOR AM RECEPTION	231	NO TRANSMISSION/CONNECTION	241	LINE NOISE
		212	NO FM RECEPTION	222	POOR FM RECEPTION	232	POOR TRANSMISSION/CONNECTION	242	OSCILLATION
		213	NO SW RECEPTION	223	POOR SW RECEPTION	233	TRANSMISSION LEVEL TOO HIGH	243	INTERSTATION INTERFERENCE
		214	NO VHF RECEPTION	224	POOR VHF RECEPTION	234	NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET	24X	OTHER 'NOISY RECEPTION/TRANSMISSION' PROBLEM
		215	NO UHF RECEPTION	225	POOR UHF RECEPTION	235	POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET		
		216	NO BS RECEPTION	226	POOR BS RECEPTION	236	NO IR TRANSMISSION		
		217	NO CS RECEPTION	227	POOR CS RECEPTION	237	ONE-SIDED CONNECTION		
		218	NO HDTV RECEPTION	228	POOR HDTV RECEPTION	238	MODEM HANGS UP IMMEDIATELY ONCE CONNECTED		
		219	NO GPS/QPS RECEPTION	229	POOR GPS/QPS RECEPTION	239	MODEM DROPS LINE DURING CONNECTION		
		21A	NO RECEPTION OF DIGITAL BROADCASTING	22A	POOR RECEPTION OF DIGITAL BROADCASTING	23X	OTHER 'TRANSMISSION/CONNECTION' PROBLEM		
		21B	NO IR RECEPTION	22B	POOR IR RECEPTION				
		21C	NO DIAL TONE	22X	OTHER 'POOR RECEPTION' PROBLEM				
		21D	NO MODEM/FAX CONNECTION						
		21E	MODEM NOT ANSWERING/NO CARRIER						
		21F	NO NETWORK CONNECTION/NETWORK INITIALIZATION FAILS						
		21X	OTHER 'NO RECEPTION' PROBLEM						
3	PICTURE	310	NO PICTURE	320	PICTURE LEVEL PROBLEM	330	PICTURE QUALITY PROBLEM	340	PICTURE NOISE
		311	NO PICTURE IN E TO E MODE	321	PICTURE TOO DARK	331	POOR PICTURE RESOLUTION	341	SNOWY PICTURE
		312	NO PICTURE IN PLAYBACK MODE	322	PICTURE TOO BRIGHT	332	POOR FOCUS	342	DOT NOISE OR DROPOUT ON PICTURE
		313	NO PICTURE IN VIEWFINDER	323	CONTRAST TOO LOW	333	RINGING ON PICTURE	343	NOISE BARS ON PICTURE
		314	NO PICTURE, ONLY RASTER	324	CONTRAST TOO HIGH	334	EXCESSIVE SMEAR/LAG	344	BLANKING LINES ON PICTURE
		315	NO RASTER, BLACK PICTURE	325	SATURATED WHITE OR BLACK LEVEL	335	POOR LINEARITY OR GEOMETRY	345	BEATING ON PICTURE
		316	ONLY HORIZONTAL LINE	326	SHADING ON PICTURE	336	PICTURE SIZE INCORRECT	346	GHOSTING ON PICTURE
		317	ONLY VERTICAL LINE	327	ONLY PARTIAL PICTURE	337	INCORRECT CENTRING OF PICTURE	347	VCR HEAD SWITCHING NOISE ON PICTURE
		318	NO PICTURE IN LCD	32X	OTHER 'PICTURE LEVEL' PROBLEM	338	PICTURE SLANTED	348	OVERMODULATION NOISE
		319	NO 2nd (OR HIGHER) MONITOR DISPLAY			339	V-SIZE INCORRECT	349	MOIRÉ
		31X	OTHER 'NO PICTURE' PROBLEM			33A	H-SIZE INCORRECT	34A	MOSAIC NOISE
						33X	OTHER 'PICTURE QUALITY' PROBLEM	34B	SCRAMBLED PICTURE
								34X	OTHER 'PICTURE NOISE' PROBLEM
4	COLOUR	410	NO COLOUR	420	COLOUR LEVEL PROBLEM	430	POOR COLOUR QUALITY	440	NOISY COLOUR
		411	NO COLOUR IN E TO E MODE	421	WEAK COLOUR	431	SOME OR ALL COLOURS MISSING	441	COLOUR NOISE ON A BLACK & WHITE PICTURE
		412	NO COLOUR IN PLAYBACK MODE	422	EXCESSIVE COLOUR	432	POOR WHITE BALANCE	442	COLOUR STREAKING
		413	NO COLOUR IN VIEWFINDER	42X	OTHER 'COLOUR LEVEL' PROBLEM	433	HUE PROBLEM	443	COLOUR BARS ON PICTURE
		414	NO COLOUR IN PART OF PICTURE			434	PURITY ERROR	44X	OTHER 'COLOUR NOISE' PROBLEM
		41X	OTHER 'NO COLOUR' PROBLEM			435	LANDING ERROR/WHITE UNIFORMITY		
						436	CONVERGENCE ERROR		
						437	REGISTRATION ERROR		
						438	PITCH MOIRÉ/RAINBOW PATTERN		
						439	COLOUR SHIFT		
						43X	OTHER 'COLOUR QUALITY' PROBLEM		
5	AUDIO	510	NO AUDIO	520	AUDIO LEVEL PROBLEM	530	AUDIO QUALITY	540	NOISY AUDIO
		511	NO SOUND IN E TO E MODE	521	LOW AUDIO LEVEL	531	POOR FREQUENCY RESPONSE	541	HUM
		512	NO PLAYBACK OF OUTGOING MESSAGE(S)	522	EXCESSIVE AUDIO LEVEL	532	DISTORTED AUDIO	542	HISS
		513	NO PLAYBACK OF INCOMING MESSAGE(S)	523	BALANCE PROBLEM	533	NO OR POOR TREBLE	543	CROSSTALK
		514	NO AUDIO PLAYBACK	524	FADER PROBLEM	534	NO OR POOR BASS	544	STATIC, POP OR CLICK NOISE
		515	NO SOUND FROM HANDSET	525	AUDIO LEVEL REMAINING/NO MUTING	535	EARPHONE/HEADPHONE AUDIO POOR	545	BUZZ
		516	NO SOUND FROM SPEAKER	52X	OTHER 'AUDIO LEVEL' PROBLEM	53X	OTHER 'AUDIO QUALITY' PROBLEM	546	SCRATCHING NOISE
		517	NO SOUND FROM EARPHONE/HEADPHONE					547	IGNITION NOISE
		518	NO MICROPHONE SOUND					548	WHISTLING/MULTIPATH NOISE
		519	NO SOUND FROM DIGITAL OUTPUT					549	DATA/DIGITAL NOISE
		51X	OTHER 'NO AUDIO' PROBLEM					54X	OTHER 'AUDIO NOISE' PROBLEM
6	MECHANISM	610	NO MECHANICAL OPERATION	620	IRREGULAR MECHANICAL OPERATION	630	SPEED PROBLEM	640	MECHANICAL NOISE
		611	NO ROTATION OF MOTOR/DISC	621	IRREGULAR ROTATION	631	SPEED TOO FAST	641	ROTATION NOISE/DRUM NOISE
		612	NO FORWARD OPERATION	622	IRREGULAR FORWARD MODE	632	SPEED TOO SLOW	642	MOTOR NOISE
		613	NO REVERSE OPERATION	623	IRREGULAR REVERSE OPERATION	633	SPEED UNADJUSTABLE	643	WIND/AIR NOISE
		614	NO FAST FORWARD OR REWIND FUNCTION	624	IRREGULAR FAST FORWARD OR REWIND FUNCTION	63X	OTHER 'SPEED' PROBLEM	644	SQUEALING
		615	NO LOADING	625	IRREGULAR LOADING OF MEDIA			645	FAN NOISE
		616	NO UNLOADING OR EJECTING	626	IRREGULAR UNLOADING OR EJECTING			646	DISC SCRAPING
		617	NO AUTO SHUT-OFF OPERATION	627	IRREGULAR AUTO SHUT-OFF OPERATION			647	NOISY TAPE LOADING
		618	TONEARM DOES NOT MOVE	628	IRREGULAR TONEARM MOVEMENT			648	GEAR NOISE
		619	DISC NOT BEING EJECTED	629	IRREGULAR EJECTION OF DISC			649	CONTROL OR SWITCH NOISY
		61A	MAGAZINE OR MODULE LOADING/UNLOADING	62A	IRREGULAR DIRECTION CHANGE			64A	GRINDING
		61B	CONTROL/SWITCH NOT WORKING	62B	FAULTY DISC CHANGE OPERATION			64B	RUMBLING
		61X	OTHER 'NO MECHANICAL OPERATION' PROBLEM	62X	OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM			64C	VIBRATION NOISE
								64X	OTHER 'MECHANICAL NOISE' PROBLEM
7	DATA PROCESSING	710	NO DATA PROCESSING OPERATION	720	FAULTY DATA PROCESSING OPERATION	730	DATA DISPLAY PROBLEM	740	KEYBOARD/POINTING DEVICE
		711	NO INITIAL SCREEN	721	INCORRECT DATA	731	INCORRECT CHARACTER DISPLAY	741	MOUSE/TRACKBALL/TRACKPAD NOT WORKING
		712	SYSTEM DOES NOT RESET	722	SYSTEM RESET WHILE BEING USED	732	MISSING DISPLAY CHARACTERS		
		713	SYSTEM DOES NOT BOOT UP	723	SYSTEM LOCKS OUT/CRASHES/HANGS	733	FAULTY GRAPHIC DISPLAY	742	KEYBOARD LOCKS UP
		714	NO OPERATION FROM PLUG-IN MODULE/PERIPHERAL	724	FAULTY OPERATION OF PLUG-IN MODULE	734	FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE	743	POINTING DEVICE LOCKS UP
		715	NO KEYBOARD OPERATION	725	FAULTY KEYBOARD OPERATION	735	FAULTY PROMPT/CURSOR OPERATION	744	STICKY KEY(S)
		716	NO OPERATION FROM OTHER INPUT/OUTPUT DEVICE	726	FAULTY OPERATION OF OTHER INPUT/OUTPUT DEVICE	736	DATA DISPLAY COLOUR INCORRECT	745	INOPERATIVE KEY(S)
		717	NO DATA STORAGE OPERATION	727	FAULTY DATA STORAGE OPERATION	737	NO PAGING OR SCROLL MODE	746	POINTING DEVICE NOT TRACKING PROPERLY
		718	NO DATA COMMUNICATION	728	FAULTY DATA COMMUNICATION	73X	OTHER 'DATA DISPLAY' PROBLEM	747	POINTING DEVICE JITTERY
		719	ERROR MESSAGE DISPLAY	729	MEMORY ERROR			748	LEFT- OR RIGHT CLICK BUTTON INOPERATIONAL
		71A	HDD BOOT FAILURE	72A	REQUIRES 'SET UP' AT BOOTING			749	TRACKPAD SURFACE DAMAGED
		71B	FDD BOOT FAILURE	72X	OTHER 'FAULTY DATA PROCESSING' PROBLEM			74A	KEYBOARD KEY(S) DAMAGED
		71X	OTHER 'NO DATA PROCESSING' PROBLEM					74X	OTHER KEYBOARD/POINTING DEVICE PROBLEM
8	PRINT/COPY/SCAN	810	NO PRINT/COPY/SCAN OPERATION	820	ERRONEOUS PRINT/COPY/SCAN OPERATION	830	POOR PRINT QUALITY	840	NOISY PRINTING
		811	NOT PRINTING	821	PRINT IMAGE REVERSED (NEGATIVE/POSITIVE)	831	INCORRECT PRINTING POSITION	841	PRINTING NOISE LINES
		812	NO COMMUNICATION WITH PRINTER	822	IRREGULAR PAPER FEED	832	LOW PRINT CONTRAST	842	DIRTY PRINTING
		813	PAPER NOT LOADING	823	ERRONEOUS PRINT MODE SWITCHING	833	EXCESSIVE PRINT CONTRAST	843	UNPLEASANT SMELL (OZONE)
		814	NO PAPER FEED	824	COPY TOO DARK	834	BLURRED PRINT IMAGE	844	BLACK LINES/STRIPES IN FEED DIRECTION
		815	NO IMAGE FIXATION	825	COPY TOO BRIGHT	835	PRINT IMAGE NOT SHARP	845	WHITE LINES/STRIPES IN FEED DIRECTION
		816	NO DOCUMENT FEEDING	826	BLACK COPY	836	DOTS MISSING IN PRINT IMAGE	846	BLACK LINES/STRIPES ACROSS FEED DIRECTION
		817	SCANNER NOT WORKING	827	WHITE COPY	837	COLOUR STREAKING	847	WHITE LINES/STRIPES ACROSS FEED DIRECTION
		81X	OTHER 'NO PRINT/COPY/SCAN OPERATION' PROBLEM	828	POOR COLOUR LEVELS	838	NO COLOUR IN PART OF PICTURE	84X	OTHER 'NOISY PRINTING' PROBLEM
				829	IRREGULAR DOCUMENT FEED	839	PRINT IMAGE/COPY INCOMPLETE		
				82A	FAULTY CORRECTION FUNCTION	83A	FAULTY CALIBRATION		
				82B	POOR SCANNING QUALITY	83X	OTHER 'PRINT QUALITY' PROBLEM		
				82X	OTHER 'PRINT/COPY/SCAN OPERATION' PROBLEM				

	5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
	150	REMOTE CONTROL PROBLEM	160	PHYSICAL DAMAGE	170	GENERAL FUNCTION PROBLEM	180	SPECIAL REQUIREMENTS
	151	NO REMOTE CONTROL OPERATION	161	DAMAGED/DEFORMED CABINET/PANEL	171	FAULTY CLOCK FUNCTION	181	TEST AND CHECK
	152	INCORRECT REMOTE CONTROL OPERATION	162	DAMAGED HANDLE/CLIP	172	FAULTY SLEEP FUNCTION	182	GENERAL OVERHAUL
	153	REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM	163	DAMAGED CONTROL KNOB(S)/BUTTON(S)/KEYPAD	173	FAULTY TIMER PROGRAMMING	183	SYSTEM/FREQUENCY CONVERSION
	154	POOR REMOTE CONTROL SENSITIVITY	164	DAMAGED DOOR/COVER	174	FAULTY TIMER OPERATION	184	INITIAL SETUP/INSTALLATION REQUESTED
	15X	OTHER 'REMOTE CONTROL' PROBLEM	165	DAMAGED SEAL	175	PROGRAMMING/USER ADJUSTMENT PROBLEM	185	MODIFICATION/CIRCUIT/INSTALLATION CHANGE
			166	DAMAGED PLUG/SOCKET/TERMINAL/CONNECTOR	176	FAULTY RECORD MUTE OPERATION	186	WRONG PRODUCT IN CARTON
			167	DAMAGED LENS	177	FAULTY PROGRAMMED PLAYBACK OPERATION	187	ACCESSORY MISSING
			168	DAMAGED CARTRIDGE OR STYLUS	178	FAULTY MEMORY FUNCTION	188	UNABLE TO CONNECT PARTS/-TO ASSEMBLE
			169	DAMAGED ANTENNA	179	FAULTY INPUT SWITCHING	189	WRONG COLOUR
			16A	DAMAGED CRT OR VIEWFINDER/LCD DISPLAY	17A	FAULTY OUTPUT SWITCHING	18B	BATTERY MOUNTING PROBLEM
			16B	MISSING COMPONENT(S) OR ORNAMENTAL PARTS	17B	ELECTRIC SHOCK/STATIC DISCHARGE	18X	OTHER SPECIAL REQUIREMENTS
			16C	PRINTED MARKINGS ERASED/PEELED OFF	17C	FAULTY SEARCH FUNCTION (INDEX/VIEW/TITLE/CHAPTER/TRACK...)	18Z	SYMPTOM NOT AVAILABLE
			16D	SET BURNING/EMITS SMOKE	17D	WRONG LANGUAGE/CHARACTER SET		
			16E	EXTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17E	ERROR CODE APPEARS IN DISPLAY		
			16F	SMELL	17F	SWITCH NOT OPERATING		
			16G	WEAK/DAMAGED STAND	17G	PEDAL NOT OPERATING		
			16H	DAMAGED SPEAKER	17H	FAULTY STANDBY MODE		
			16J	SET GETS VERY HOT / PARTS MELTING	17J	FAULTY HIBERNATION MODE		
			16K	FOREIGN SUBSTANCE ON/IN UNIT	17K	NO AUDIBLE WARNING SIGNAL		
			16L	BURNING MARKS	17L	FAULTY OPERATION OF PARENTAL LOCK/KEYLOCK FUNCTION		
			16M	INTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17M	FAULTY MODE SWITCHING		
			16N	DAMAGED POWER CABLE	17N	MENU FUNCTION PROBLEM		
			16P	DAMAGED ACCESSORY	17X	OTHER 'GENERAL FUNCTION' PROBLEM		
			16R	DISCOLOURATION				
			16X	OTHER PHYSICAL DAMAGE				
	250	UNSTABLE RECEPTION/TRANSMISSION	260	TUNING PROBLEM	270	SPECIAL COMMUNICATION PROBLEM	280	SPECIAL RECEPTION PROBLEM
	251	TUNING DRIFT	261	MANUAL TUNING PROBLEM	271	FAULTY DIALLING	281	FAULTY STEREO RECEPTION
	252	FADING	262	AUTOMATIC TUNING PROBLEM	272	FAULTY CHANNEL SELECTION	282	FAULTY MAIN CHANNEL (A) FUNCTION
	253	INTERMITTENT LINE/LINE BREAKING OFF	263	INCORRECT TUNING	273	FAULTY AUTO-ANSWER OPERATION	283	FAULTY SUB-CHANNEL (B) FUNCTION
	254	NO OR UNSTABLE CONNECTION COMBINED WITH 'WEAK SIGNAL STRENGTH' INDICATION	264	TUNING MEMORY PROBLEM	274	FAULTY MESSAGE READ-OUT FUNCTION	284	FAULTY SSB RECEPTION
			26X	OTHER 'TUNING' PROBLEM	275	FAULTY AUTODIAL/REDIAL MEMORY	285	FAULTY RDS/VPS/PDC/XDS OPERATION
	25X	OTHER 'UNSTABLE RECEPTION/ TRANSMISSION' PROBLEM			276	FAULTY SPEECH PROCESSING	286	FAULTY TELETEXT/CLOSE CAPTION/EPG RECEPTION
					277	NO RINGING TONE	287	FAULTY SATELLITE/RTTY RECEPTION
					278	LOUD/WEAK RINGING TONE	288	FAULTY FAX OPERATION
					279	MODEM STUCK OFF HOOK	289	MODEM NOT RECOGNIZED BY SYSTEM
					27A	FAX DOES NOT WORK PROPERLY	28A	FAULTY CALL CHARGE DISPLAY
					27B	MODEM CAUSES PROBLEM WITH PHONE	28B	FAULTY HANDS-FREE OPERATION
					27C	NO MODEM DIAL TONE	28C	SET LOCKED
					27X	OTHER 'SPECIAL COMMUNICATION' PROBLEM	28X	OTHER 'SPECIAL RECEPTION' PROBLEM
	350	UNSTABLE PICTURE	360	POOR PICTURE RECORDING	370	SPECIAL PICTURE FUNCTION PROBLEM	380	PICTURE DISPLAY/PICKUP PROBLEM
	351	SYNC PROBLEM	361	NO PICTURE RECORDING	371	EDITING PROBLEM	381	BURN MARK ON DISPLAY/PICKUP
	352	PICTURE PUMPING	362	NO ERASURE PROTECTION FOR VIDEO	372	FAULTY FADING/WIPER OPERATION	382	SCRATCH ON DISPLAY/PICKUP
	353	PICTURE JITTER	363	PREVIOUS VIDEO RECORDING NOT BEING ERASED	373	FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION	383	DUST/DIRT ON DISPLAY/PICKUP
	354	PICTURE SHAKING (HORIZONTAL OR VERTICAL)	364	UNWANTED ERASURE OF PICTURE	374	FAULTY SUPERIMPOSE/TELOP OPERATION	384	PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP
	355	FLICKERING PICTURE	365	NO CAMERA RECORDING	375	FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION	385	BRIGHT POINT(S) IN PHOSPHOR/PIXEL
	356	FLASHING PICTURE	366	ONLY ONE FIELD PER FRAME BEING RECORDED	376	FAULTY PICTURE TRANSMISSION	386	LINES ACROSS/DOWN IMAGE
	357	CYCLIC PICTURE MUTING	367	RECORDS ONLY A FEW PICTURES	377	FAULTY DIGITAL SHUTTER FUNCTION	387	OUT OF SPECS PIXEL DEFAULTS
	358	HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE	36X	OTHER 'PICTURE RECORDING' PROBLEM	378	FAULTY GENLOCK FUNCTION	388	BACKGROUND BURNT IN
	359	VCR SKEW/H-SHIFT ERROR			379	FAULTY FLASH/STROBE FUNCTION	38X	OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM
	35A	FROZEN PICTURE			37A	FAULTY DIGITAL PICTURE/ZOOMING FUNCTION		
	35B	JUMPING/REPEATING PICTURE			37B	FAULTY AUTO-EDIT FUNCTION		
	35X	OTHER 'UNSTABLE PICTURE' PROBLEM			37C	FAULTY PICTURE STABILIZER FUNCTION		
					37D	FAULTY PICTURE CAPTURE FUNCTION		
					37E	FAULTY SUBTITLING FUNCTION		
					37F	FAULTY VARIABLE SPEED PLAYBACK		
					37G	FAULTY VIEW-/MULTI-ANGLE SWITCHING		
					37H	FAULTY ASPECT RATIO SWITCHING		
					37J	THUMBNAIL- OR INDEX PICTURE PROBLEM		
					37K	NO BLANKING SCREEN		
					37X	OTHER 'SPECIAL PICTURE FUNCTION' PROBLEM		
	450	UNSTABLE COLOUR	460	POOR COLOUR RECORDING	470	SPECIAL COLOUR FUNCTION PROBLEM	480	
	451	COLOUR FLASHING	461	NO COLOUR RECORDING	471	FAULTY AUTOMATIC WHITE BALANCE		
	452	HUE CONSTANTLY CHANGING	462	NOISY COLOUR RECORDING	472	FAULTY COLOUR EFFECTS FUNCTION		
	453	FLICKERING COLOUR	46X	OTHER 'COLOUR RECORDING' PROBLEM	47X	OTHER 'SPECIAL COLOUR FUNCTION' PROBLEM		
	454	COLOUR NOT LOCKED						
	45X	OTHER 'UNSTABLE COLOUR' PROBLEM						
	550	UNSTABLE AUDIO	560	POOR AUDIO RECORDING	570	POOR SPECIAL AUDIO FUNCTION	580	STEREO/MULTI MODE OPERATION PROBLEM
	551	JUMPING OR REPEATING AUDIO	561	AUDIO NOT BEING RECORDED	571	FAULTY FADE OPERATION	581	NO STEREO OPERATION
	552	AUDIO PUMPING OR BREATHING	562	NO ERASURE PROTECTION FOR AUDIO	572	FAULTY ECHO OPERATION	582	POOR CHANNEL SEPARATION
	553	AUDIO DROPOUTS	563	PREVIOUS AUDIO RECORDING NOT BEING ERASED	573	FAULTY MIXING OPERATION	583	DIFFERENCE IN PHASE BETWEEN CHANNELS
	554	CYCLIC AUDIO MUTING	564	UNWANTED ERASURE OF AUDIO	574	FAULTY REPEAT MODE OPERATION	584	PROBLEM WITH SURROUND SOUND MODE
	555	WOW AND FLUTTER	565	MESSAGE NOT BEING RECORDED	575	FAULTY AUDIO PROCESSING	585	PROBLEM WITH PCM AUDIO MODE
	556	HOWLING/ACOUSTIC FEEDBACK	566	DISTORTED AUDIO RECORDING	576	FAULTY SYNC RECORDING OPERATION	58X	OTHER 'STEREO/MULTI MODE' PROBLEM
	557	ECHO IN SOUND	56X	OTHER 'AUDIO RECORDING' PROBLEM	577	FAULTY DBB/DOL OPERATION		
	55X	OTHER 'UNSTABLE AUDIO' PROBLEM			578	FAULTY NOISE REDUCTION OPERATION		
					579	FAULTY AUDIO DUB FUNCTION		
					57A	FAULTY TITLE PROGRAMMING		
					57B	FAULTY MIC CONTROL		
					57C	FAULTY PITCH CONTROL		
					57X	OTHER 'SPECIAL AUDIO FUNCTION' PROBLEM		
	650	MECHANICAL INSTABILITY	660	DAMAGE TO MEDIA	670	MECHANICAL OPERATION PROBLEM	680	LENS PROBLEM
	651	UNEVEN FEET	661	TAPE GETS SCRATCHED	671	FAULTY START/STOP OPERATION	681	FOCUS PROBLEM
	652	FAULTY HINGE	662	DISC GETS SCRATCHED	672	FAULTY PAUSE OPERATION	682	ZOOM PROBLEM
	653	VIBRATING/JUMPING	663	TAPE GETS CHEWED/WRINKLED	673	FAULTY AUTOMATIC PROGRAM SEARCH	683	IRIS PROBLEM
	654	PARTS LOOSE	664	TAPE JAMMED OR BROKEN	674	FAULTY CUE/REVIEW MODE	684	MACRO PROBLEM
	655	DAMAGED WHEEL(S)	665	TAPE GETS CURLED	675	FAULTY SLOW MOTION OPERATION	68X	OTHER 'LENS' PROBLEM
	65X	OTHER 'MECHANICAL INSTABILITY' PROBLEM	666	SLACK TAPE	676	FAULTY HIGH-SPEED SCANNING MODE		
			667	TAPE STICKING	677	FAULTY SPEED COPY FUNCTION		
			66X	OTHER 'SOFTWARE DAMAGE' PROBLEM	678	FAULTY REPEAT OPERATION		
					679	FAULTY RECORD REVIEW MODE		
					67A	FAULTY AMS OPERATION		
					67B	AUTO-REVERSE MALFUNCTION		
					67C	FAULTY END DETECTION		
					67D	FAULTY DISC SIDE (A-B SELECT) SWITCHING		
					67X	OTHER 'MECHANICAL OPERATION' PROBLEM		
	750	PERIPHERAL PROBLEM (NON-STORAGE)	760	DATA STORAGE PROBLEM	770	SPECIAL DATA PROCESSING FUNCTION PROBLEM	780	INTERFACE PROBLEM
	751	PERIPHERAL DOES NOT INITIALISE	761	FORMATTING PROBLEM	771	FAULTY SELF-DIAGNOSTIC MODE	781	USB INTERFACE PROBLEM
	752	COMMUNICATION FAILURE WITH PERIPHERAL	762	DATA ON STORAGE MEDIUM BEING LOST	772	FAULTY WORD PROCESSING FUNCTION	782	PARALLEL INTERFACE PROBLEM
	753	INTERNAL PERIPHERALS FAILURE	763	FRAME MEMORY PROBLEM	773	FAULTY GRAPHIC EDIT FUNCTION	783	SCSI INTERFACE PROBLEM
	754	EXTERNAL PERIPHERALS FAILURE	764	READ/WRITE ERRORS	774	PROGRAM CANNOT BE INSTALLED	784	SERIAL INTERFACE PROBLEM
	755	NETWORK CARD ERROR	765	HARD- OR OPTICAL DRIVE PROBLEM	775	PRE-LOADED PROGRAM CANNOT BE STARTED UP	785	INCOMPATIBLE WITH OTHER SYSTEMS
	756	PERIPHERAL FAILS SELF TEST	766	FLOPPY DRIVE PROBLEM	776	NOT PRE-LOADED PROGRAM CANNOT BE STARTED UP	786

EACEM - SECTION CODES

COMMON	
ANT	ANTENNA SECTION
APR	SIGNAL PROCESSING (ANALOG)
BCH	BATTERY CHARGE
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CTR	CONTROL PANEL
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
FLX	FLEXIBLE PRINTED CIRCUIT BOARD
HFS	HIGH FREQUENCY SECTION (RF)
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
ILN	i.LINK (IEEE1394) SECTION
INP	SIGNAL INPUT SECTION
IRD	INFRARED (IrDA) SECTION
MEM	MEMORY CIRCUIT
OUT	SIGNAL OUTPUT SECTION
PRG	PROGRAMMING SECTION
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFU	BOOSTER,RF UNIT
SFT	SOFTWARE (TAPE, DISC, ETC.)
SNS	SENSOR UNIT
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
SOUND-RELATED	
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
CDC	CD CHANGER SECTION
CDS	CD SECTION
MDC	MD CHANGER SECTION
MDS	MINIDISC SECTION
MIC	MICROPHONE SECTION
PUD	PICK-UP DEVICE
SHD	STATIONARY HEAD(S)
SPK	SPEAKER
PICTURE-RELATED	
CAM	CAMERA CIRCUIT
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
DFL	DEFLECTION CIRCUIT
DVD	DVD SECTION
FPK	FOCUS PACK
IMG	IMAGE DISPLAY UNIT

PICTURE-RELATED	
LCD	LCD SECTION
LMP	LAMP/FLASH SECTION
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
PC-RELATED	
FDD	FLOPPY DISC DRIVE
FMW	FIRMWARE
HDD	HARD DISC DRIVE
ISA	ISA SECTION
JST	JOYSTICK
KBD	KEYBOARD (SEPARATE)
MDM	MODEM SECTION
NIF	NETWORK INTERFACE
PAR	PARALLEL PORT
PCC	PC CARD
PCI	PCI SECTION
SCS	SCSI PORT
SER	SERIAL PORT
USB	USB PORT
MECHANICAL	
ARM	ARM MECHANISM
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
DDM	DISC DRIVE MECHANISM
EXC	EXTERNAL CONNECTOR
HCM	HEAD CARRIAGE MECHANISM
HOL	CASSETTE HOLDER
INC	INTERNAL CONNECTOR
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRI	PRINT BLOCK
RFM	RIBBON FEED MECHANISM
RHD	ROTARY HEAD(S)
SLD	SLED MECHANISM
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

EXAMPLE OF USE:

FLAG	SYMPTOM CODE	PART NO.	REF. NO.	SECTION	PCB	DEFECT CODE	REPAIR CODE	QTY
1	1436 41	134 56 71 89 1XX XX XX XX XX XX	R11 123	TDM	YA22	C1	Z1	

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

DEFECT CODES

MECHANICAL	
A	WORN OUT (OR GENERAL MECHANICAL DEFECT)
A1	MISOPERATING
B	DIRTY, CLOGGED
C	MECHANICALLY MISALIGNED
D	CUT, BROKEN
E	DEFORMED
F	SNAPPED
G	SCRATCHED, DENTED, SHARP EDGES
H	CRACKED, PEELED, CORRODED, MELTED
I	LOOSE/OFF/STRIPPED
J	SHAKY, UNSTABLE
K	LEAKING (MECHANICAL)
L	DRY (NO LUBRICANT)
M	FOREIGN OBJECT

ELECTRICAL	
N	DEFECTIVE ELECTRICAL COMPONENT/MODULE
O	BURNT, ARCING, MISSING PIXELS
P	ELECTRICALLY MISALIGNED/WRONG SETTING
Q	SHORT CIRCUIT
R	OPEN CIRCUIT
S	LEAKING (ELECTRICAL)
T	BAD CONTACT, CONNECTION
T1	BAD EARTH CONNECTION
U	OPEN PATTERN
V	CRACKED PRINTED CIRCUIT BOARD
W	COLD OR NO SOLDERING
X	BRIDGED SOLDERING
Y	WRONG COMPONENT/MODULE
Z	MISSING COMPONENT/MODULE
1	SOFTWARE PROBLEM
11	LOSING DATA FROM MEMORY
12	FAULTY PROGRAM SETTING/INSTALLATION
13	SOFTWARE DEFECTIVE OR INCOMPLETE
14	SOFTWARE SETUP PROBLEM
15	NO IDENTIFICATION / AUTHENTICATION OF PRODUCT OR USER
2	EXHAUSTED, LOW EMISSION
3	NO PROBLEM FOUND (SET WITHIN SPEC)
4	NO PROBLEM FOUND - CUSTOMER MISUNDERSTANDING
5	NO PROBLEM FOUND - LOCAL CONDITIONS
51	FAULTY MAINS VOLTAGE
6	UNABLE TO DIAGNOSE FAULT
7	INCORRECTLY WIRED/ASSEMBLED
81	INCORRECT EQUIPMENT CONNECTION
9	CUSTOMER MISUSE
93	UNAUTHORISED MODIFICATION

REPAIR CODES

A	REPLACEMENT
B	MECHANICAL ALIGNMENT
C	ELECTRICAL ALIGNMENT
D	RESOLDERING
D1	REFITTING, PUT BACK IN POSITION (CONNECTOR, TUBE...)
E	CLEANING
F	LUBRICATION
G	REPAIRED ELECTRICAL PARTS
H	REPAIRED MECHANICAL PARTS
I	MODIFICATION REQUESTED BY MANUFACTURER
J	REMOVED
K	ADDED
L	FUNCTIONAL CHECK
M	SPECIFICATION MEASUREMENT
N	MAINTENANCE
O	REFURBISHING, RECONDITIONING
P	PREVENTIVE PARTS REPLACEMENT

Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
U	EXPLANATION FOR CUSTOMER
V	COST ESTIMATION REFUSED
W	COST ESTIMATION WITH PARTS
X	COST ESTIMATION WITHOUT PARTS
Y	RETURN WITHOUT REPAIR
Z	PRODUCT EXCHANGE
Z1	PRODUCT EXCHANGE (REPAIR TOO EXPENSIVE)
Z2	PRODUCT EXCHANGE (TOO MANY VISITS/REPAIRS)
Z3	PRODUCT EXCHANGE (PARTS NOT AVAILABLE)
Z4	PRODUCT EXCHANGE (IMPOSSIBLE TO REPAIR)
Z5	PRODUCT EXCHANGE (ON REQUEST OF RETAILER)
Z6	PRODUCT EXCHANGE (ON REQUEST OF MANUFACTURER)
1	SOFTWARE CORRECTION/RESET
2	SOFTWARE UPGRADE
3	PRODUCT UPGRADE (ON REQUEST)

REV 03 - 2000/02
9-948-441-10